

ABSTRACT OF THE DISCLOSURE

A control system for use in compensating for temperature-induced dispersion drift of an optical path, comprising an input adapted to obtain temperature data associated with the optical path; a control module adapted to determine control information on the basis of the temperature data; and an output adapted to provide a control signal to a dispersion compensator. The control signal is determined such that its receipt by the dispersion compensator causes the latter to induce a dispersive effect in a signal that travels the optical path, the dispersive effect being related to the control information. The ability to compensate for temperature-induced dispersion drift reduces the distortion margin in optical link budgets, allowing optical links to have longer reach, or to achieve the same reach using fewer line amplifiers. In a specific embodiment, dispersion compensation is accomplished via an open-loop control system such that feedback from the receiver site is not required.